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MALARIA KNOWLEDGE AMONG RURAL PATENT AND PROPRIETARY MEDICINE VENDORS IN NIGERIA

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Annotation: The effectiveness of disease control is determined by the achievements of the pharmaceutical industry, the relevant organization of the healthcare system, as well as the recommendations of pharmacists. The aim of our study was to analyze the diagnosis and treatment of malaria in the rural areas of Nigeria by rural patent and proprietary medicine vendors.

Key words: malaria, diagnosis, treatment, awareness, questionnaire, rural patent and proprietary medicine vendors.

Background. According to WHO's World Malaria Report in 2019, Nigeria has 25% of malaria cases globally. Malaria deaths reduced from about 400 000 in 2010 to about 260 000 in 2018, the largest reduction being in Nigeria, from almost 153 000 deaths in 2010 to about 95 000 deaths in 2018 [1]. The first line treatment of malaria in Nigeria is ACTs including; artesunate–pyronaridine, A9 arterolane–piperaquine, A10 artemisinin–piperaquine, and artemisinin–naphthoquine e.t.c [2]. According to WHO in African Region the efficacy rates of artemether-lumefantrine (AL), aartesunat-amodiaquin (AS-AQ) and dihydroartemisinin-piperaquine (DHA-PPQ) for P. falciparum were more than 98%, and efficacy has remained high over time while

first-line treatment remains high for P. falciparum and P. vivax in America.

Malaria can be diagnosed by CBC, blood smear, serological test, antigen detection, rapid diagnostic tests (RDTs). RDTs determines the specific malaria antigen e.g pLDH, HRP2 and aldolase [2]. It is also used for quick determination of malaria infections in areas lacking high quality malaria microscopy.

Aim of the study: To analyze the diagnosis and treatment of malaria in the rural areas of Nigeria by rural patent and proprietary medicine vendors (PPMV), who we have little knowledge on.

Material and methods. In order to understand there knowledge, 160 rural patent and proprietary medicine vendors were randomly selected to take part in a survey in LGA's in Oyo and Bayelsa, using a well structured unspecified questionnaire. One of the few questions that was asked was about the diagnosis and treatment of malaria which has been discussed below. PPMV were asked if it is necessary to diagnose or use the symptoms of patients to make conclusions on malaria. They also were asked about drugs they would give their malaria patients.

Since little is known about their knowledge on malaria testing and treatment as recommended in the 2011 National Malaria Control Programme policy. After analyzing their data, results to our analysis were found.

Result. 89% PPMV's knew that artemisinin-based combination therapy (ACT) is recommended in the national policy while 91% thought non-ACT were endorsed.

Some PPMVs stated they would treat a malaria case with an artemisinin-based combination at the correct dose of 33% for a child under five, 47% for an adult male and 14% for a pregnant woman in her second trimester. While some PPMVs reported that they would diagnose a case of malaria before treatment using a malaria rapid diagnostic test (RDT) kit of 1.9% for children under five, 7.5% for adult males and 3.1% for pregnant women in their first trimester due to lack of knowledge. Therefore, almost two-thirds (65.6%) would correctly refer children with severe malaria to health facility.

When we suspect malaria in children, parasitological examination should be

confirmed before treatment begins, as long as the diagnosis doesn't significantly delay treatment. Artemisinin derivatives are safe and well tolerated by young children. Therefore, the choice of ACT will be determined largely by the safety and tolerability of the partner drug. So many antimalarial drugs lack paediatric formulations, necessitating the division of adult tablets, which can lead to inaccurate dosing. WHO recommends newly adjusted dosing schemes for dihydro-artemisinin + piperaquine in children weighing less than 25 kg and for parenteral artesunate in children weighing less than 20 kg. For infants weighing less than 5 kg with uncomplicated *P. falciparum*, WHO recommends treatment with an ACT at the same mg/kg body weight dose as for children weighing 5 kg.

Most recent data support the use of intravenous artesunate in preference to artemether or quinine for the treatment of severe malaria in children. Because the clinical condition of children with malaria can deteriorate rapidly, there should be a low threshold for the use of parenteral treatment.

In pregnant women, both maternal anaemia and placental parasitaemia can lead to low birth weight, which is an important contributor to infant mortality. In settings of high-transmission, the adverse effects of *P. falciparum* infection in pregnancy are most pronounced for women in their first pregnancy.

Intermittent preventive treatment in pregnancy (IPTp) reduces maternal malaria episodes, maternal and fetal anaemia, placental parasitaemia, low birth weight, and neonatal mortality. Furthermore, every pregnant woman should be given iron and folic acid supplementation as a part of routine antenatal care. WHO recommends the following interventions for the prevention and treatment of malaria during pregnancy: in all areas, moderate to high malaria transmission in Africa, intermittent preventive treatment in pregnancy (IPTp) with sulfadoxine-pyrimethamine (SP), as part of antenatal care services; use of long-lasting insecticidal nets (LLINs); prompt diagnosis and effective treatment of malaria infections.

Based on the current available evidence, IPTp-SP remains effective in preventing the adverse consequences of malaria on maternal and fetal outcomes even

in areas where quintuple mutations linked to SP resistance are prevalent in *P. falciparum*. Therefore, IPTp-SP should still be administered to pregnant women in such areas.

In conclusion, Based on this study, it can be confirmed that the knowledge of the diagnosis and treatment of malaria using RDT kit and ACT respectively exists among the PPMV's but they still need to be educated, trained and supervised to ensure a safety diagnosis and treatment in rural areas.

LITERATURE

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